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Published to advance the Science of cold-blooded vertebrates

ON THE OCCURRENCE OF *ISUROPSIS* *GLAUCA* ON THE COAST OF CALIFORNIA.

The writer has recently seen a photograph of this shark that was caught at Santa Catalina Island, California. This is the first record of this species on our coast, it having hitherto been known only from Japanese and Hawaiian waters. The photograph was sent to Dr. Jordan in 1906 by the late C. F. Holder, who states on the back of it that it is of a specimen 13 feet in length; that small specimens of four or five feet in length are not uncommon about the island, that the teeth are long, slender and curved, and that it is locally known as the Bonito Shark.

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NOTE ON SILVERSIDES AND SARDINES.

In examining large masses of Sardines (*Sardinia caerulea*) brought into the canneries at Long Beach in California, I found many specimens of the rare Silverside *Leuresthes crameri*, Jordan and Evermann. This species was described originally from Punta Abreojos in Lower California. It differs

from *Leuresthes tenuis*, a smaller form, rather common in the California bays, mainly in the shorter head. The alleged difference in the size of the scales is fallacious, both forms having about 67 in a series, the number 75 assigned to *L. tenuis* being apparently a misprint.

I am now convinced that the two forms belong to one species, *L. crameri* is the adult, found in the open sea; *L. tenuis*, the young, inhabiting sheltered bays. The name *Leuresthes tenuis* (Ayres) has priority.

I may note here that the true sardines have been lately separated from related forms by Dr. Antipa, under the generic name of *Sardina*. *Sardina* is easily distinguished by the fine ridges on its opercles, these bones being smooth in *Sardinella*. The rare deep-water sardine of the Atlantic Coast (*Sardinia pseudohispanica* Poey) is, however, a true *Sardina*, hence *Sardinia* replaces *Sardina*. The Sardine of Europe becomes *Sardinia pilchardus*; that of California *Sardinia cærulea*, that of Chile *Sardinia sagax*, that of Japan *Sardinia melanosticta*. There is a rare European form similar to the American *Sardinella anchovia* and may be the same, *Sardinella aurita*, a name older than *anchovia*.

The so-called "scaled sardines" of the Atlantic Coast belong to a different genus, *Harengula*, (erroneously united with *Sardinella* by Jordan and Evermann). The valid species of this genus on the Atlantic Coast are apparently three, *Sardinella maculosa*, *macrophthalma* and *pensacolæ*. *Lile stoli-fera* from the West Coast of Mexico is generically different. The group of herrings, sardines and anchovies is now receiving a much needed revision at the hands of Mr. Alvin Seale, who has here Poey's type of *Sardinia pseudohispanica*.

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